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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO.       |
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| 10/606,604   | 06/26/2003  | Cesar A. Gonzalez    | VRT0055US               | 4147                   |
| 60429 7590 12/05/2008<br>CAMPBELL STEPHENSON LLP<br>11401 CENTURY OAKS TERRACE<br>BLDG. H, SUITE 250<br>AUSTIN, TX 78758 |             |                      | EXAMINER<br>DOAN, DUC T |                        |
|  |             |                      | ART UNIT<br>2188        | PAPER NUMBER           |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/606,604 | <b>Applicant(s)</b><br>GONZALEZ, CESAR A. |  |
|                              | <b>Examiner</b><br>DUC T. DOAN       | <b>Art Unit</b><br>2188                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

Claims 1-33 have been presented for examination in this application.

Claim 1-33 are rejected.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by other's in this country or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

e) the invention was described in (1) an application for patent, published under section 122(b) by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the

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United States and was published under Article 2192) of such treaty in the English language.

Claims 1-33 is rejected under 35 U.S.C. 102 (e) as being anticipated by Bitner et al (US 2004/0153614).

As in claim 1, Bitner discloses a system comprising:  
a computer readable storage medium comprising program instructions executable to implement a virtual device interface (Fig 8, backup application and VTL as virtual device interface for primary device 150, paragraph 20), wherein said virtual device interface is configured to allow a primary storage device to be accessed using at least one operation that is substantially the same as that used to control a secondary storage device, wherein the primary storage device is accessed using said at least one operation in response to a call received from a utility by said virtual device interface (Fig 8, backup application and VTL receives a call by a routine/utility in an user program, paragraph 56), said virtual device interface is coupled to control said primary storage device and said secondary storage device (Fig 7, virtual devices interfacing comprises primary storage 128 and secondary storage 130), said primary storage device comprises non-removable storage media and is configured to provide access to data stored on the non- removable storage media (Fig 7 128 comprises hard-disk non removable, paragraph 49) , and said secondary storage device comprises removable storage media and is configured to permit access to data stored on the removable storage media (Fig 7 130, paragraph 56 physical tape library unit TLU).

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As in claim 2, Bitner discloses wherein said virtual device interface is further configured to allow the utility to access said primary storage device (Fig 7 128) as said secondary storage device (paragraph 48).

As in claim 3, Bitner discloses wherein said virtual device interface is a virtual tape interface (paragraph 48).

As in claim 4, Bitner discloses further comprising said primary storage device (Fig 7 128).

As in claim 5, Bitner discloses wherein said virtual tape interface is configured to create a virtual loader on said primary storage device (an instant/ a virtual image of a compatible tape storage device is created, paragraph 48).

As in claim 6, Bitner discloses further comprising: said secondary storage device (Fig 7, paragraph 56).

As in claim 7, Bitner discloses wherein said virtual tape interface comprises: a virtual loader library, communicatively coupled to said primary storage device; and a virtual loader utilities module, communicatively coupled to said virtual loader library (a VTL comprises utilities for carrying out tape drives and tape library functions, paragraph 55).

As in claim 8, Bitner discloses wherein said virtual tape interface further comprises:  
a main module, communicatively coupled to said virtual loader library; and  
a configuration file, accessible by said main module, wherein said configuration file comprises information that allows said virtual loader library to create a virtual loader on

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said primary storage device (a VTL comprises utilities for carrying out tape drives and tape library functions, paragraph 55).

As in claim 9, Bitner discloses wherein said virtual loader library is configured to allow the utility to access said primary storage device as said secondary storage device (paragraph 55).

As in claim 10, Bitner discloses a method comprising:

receiving a first command at a virtual device interface, wherein the first command is received from a utility (Fig 8, backup application and VTL receives a call by a routine/utility in an user program, paragraph 56), converting the first command to a second command using the virtual device interface, wherein said first command is configured to control a first type of storage device (Fig 7, 150 paragraph 48), said second command is configured to control a second type of storage device (Fig 7 primary device 150 ), said first type of storage device is a secondary storage device (Fig 7 secondary storage device 130) , said second type of storage device is a primary storage device (Fig 7 130), said primary storage device comprises non-removable storage media (Fig 7 primary device 150 as hard disk, paragraph 49), and is configured to provide access to data stored on the non-removable storage media (Fig 7 primary device 150 as hard disk non-removable, paragraph 49), and said secondary storage device comprises removable storage media and is configured to permit access to data stored on the removable storage media (Fig 7 secondary storage device 130 tape, removable media); and accessing said secondary storage device using the virtual device interface (Fig 7 130, paragraph 56 physical tape library unit TLU).

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As in claim 11, Bitner discloses wherein said secondary storage device is a tape backup device, and said primary storage device is a hard drive (Fig 7 primary device 150 as hard disk non-removable, paragraph 49).

As in claim 12, Bitner discloses creating a virtual loader, wherein said converting and said creating are performed by said virtual device interface (Fig 7, paragraph 48, an instant/ a virtual image of a compatible tape storage device is created).

As in claim 13, Bitner discloses wherein said creating creates a directory on said hard drive (a directory is generated for data stored in DLU, paragraph 129).

As in claim 14, Bitner discloses further comprising: storing information on a virtual tape in said virtual loader, wherein said storing stores information in a file in said directory, and said file corresponds to said virtual tape (paragraphs 137-142, storing user data in the directory; Examiner further notes that user data stored in a storage device is belonged to file).

As in claim 15, Bitner discloses wherein said secondary storage device is communicatively coupled to said virtual device interface (Fig 7, secondary storage 130 communicatively coupled by switch 122).

As in claim 16, Bitner discloses a computer system comprising: a processor (Fig 7 and 8, host server); computer readable medium coupled to said processor; and computer code, encoded in said computer readable medium, configured to cause said processor to (paragraph 20): receive a first command at a virtual device interface, wherein the first command is received from a utility (Fig 8, backup application and VTL receives a call by a routine/utility in an user program, paragraph 56), convert the first

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command to a second command using the virtual device interface, wherein said first command is configured to control a first type of storage device, said second command is configured to control a second type of storage device (Fig 7, VTL convert tape command to disk command), said first type of storage device is a secondary storage device (Fig 7 130 secondary storage device), said second type of storage device is a primary storage device (Fig 7 128 primary storage device), said primary storage device comprises non-removable storage media and is configured to provide access to data stored on the non-removable storage media (Fig 7 128 primary storage device comprises non-removable hard disks, paragraph 48), and said secondary storage device comprises removable storage media and is configured to permit access to data stored on the removable storage media (Fig 7 130 secondary storage device comprise tape removable media, paragraph 56); and access said secondary storage device using the virtual device interface (Fig 7 130, paragraph 56 physical tape library unit TLU).

As in claim 17, Bitner discloses wherein said secondary storage device is a tape backup device (Fig 7 130), and said primary storage device is a hard drive (Fig 7 128).

As in claim 18, Bitner discloses further comprising: said virtual device interface, wherein said computer code is further configured to cause said processor to create a virtual loader, and said virtual device interface comprises said computer code configured to cause said processor to convert and said computer code configured to cause said processor to create (VTL converts tape to disk command, an instant/ a virtual image of a compatible tape storage device is created, paragraph 48).



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As in claim 19, Bitner discloses wherein said computer code configured to cause said processor to create is further configured to cause said processor to: create a directory on said hard drive (a directory is generated for data stored in DLU, paragraph 129).

As in claim 20, Bitner discloses wherein said computer code is further configured to cause said processor to: store information on a virtual tape in said virtual loader (an instant/ a virtual image of a compatible tape storage device is created to store information on the virtual tape, paragraph 48), wherein said computer code configured to cause said processor to store said information is further configured to cause said processor to store said information in a file in said directory, and said file corresponds to said virtual tape (paragraphs 137-142, storing user data in the directory; Examiner further notes that user data stored in a storage device is belonged to file).

As in claim 21, Bitner discloses wherein said secondary storage device is communicatively coupled to said virtual device interface (Fig 7, secondary storage 130 communicatively coupled by switch 122).

As in claim 22 Bitner discloses a computer program product comprising: a first set of instructions (paragraph 20), executable on a computer system, configured to convert a first command to a second command (Fig 7, VTL convert tape command to disk command), wherein said first command is received by a virtual device interface from a utility (Fig 8, backup application and VTL receives a call by a routine/utility in an user program, paragraph 56); said first command is configured to control a first type of storage device (Fig 7, tape command for tape devices 130), said second command is

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configured to control a second type of storage device (Fig 7, disk command for disk device 128), said first type of storage device is a secondary storage device (Fig 7 130 secondary storage device), said second type of storage device is a primary storage device (Fig 7 128 primary storage device), said primary storage device comprises non-removable storage media and is configured to provide access to data stored on the non-removable storage media (Fig 7 128 primary storage device comprises non-removable hard disks, paragraph 48), said secondary storage device comprises removable storage media and is configured to permit access to data stored on the removable storage media (Fig 7 130 secondary storage device comprises removable tape, paragraph 56) and said virtual device interface comprises said first set of instructions (Fig 7, command received from 120); a second set of instructions (command to 130), executable on said computer system, configured to access said secondary storage device using said virtual device interface (paragraph 56); and computer readable media, wherein said computer program product is encoded in said computer readable media (paragraph 20).

As in claim 23, Bitner discloses wherein said secondary storage device is a tape backup device (Fig 7 131 tape backup device), and said primary storage device is a hard drive (Fig 7, 128 hard disk).

As in claim 24, Bitner discloses a third set of instructions, executable on said computer system, configured to create a virtual loader, wherein said virtual device interface comprises said first, said second, and said third set of instructions (an instant/ a virtual image of a compatible tape storage device is created to store information on the virtual tape, paragraph 48).

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As in claim 25, Bitner discloses wherein said third set of instructions comprises: a first subset of instructions, executable on said computer system, configured to create a directory on said hard drive (a directory is generated for data stored in DLU, paragraph 129).

As in claim 26, Bitner discloses further comprising: a fourth set of instructions, executable on said computer system, configured to store information on a virtual tape in said virtual loader, wherein said fourth set of instructions comprises a second subset of instructions, executable on said computer system, configured to cause said processor to store said information in a file in said directory, and said file corresponds to said virtual tape (paragraphs 137-142, storing user data in the directory; Examiner further notes that user data stored in a storage device is belonged to file).

As in claim 27, Bitner discloses wherein said secondary storage device is communicatively coupled to said virtual device interface (Fig 7, secondary storage 130 communicatively coupled by switch 122).

As in claim 28, Bitner disclose an apparatus comprising: means for converting a first command to a second command (Fig 7, VTL convert tape command to disk command), wherein said first command is received by a virtual device interface from a utility (Fig 8, backup application and VTL receives a call by a routine/utility in an user program, paragraph 56), said first command is configured to control a first type of storage device (Fig 7, tape command for tape devices 130), said second command is configured to control a second type of storage device (Fig 7, disk command for disk devices 128), said first type of storage device is a secondary storage device (Fig 7 130

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secondary storage device), said second type of storage device is a primary storage device (Fig 7 128 primary storage device), said primary storage device comprises non-removable storage media and a means to provide access to data stored on the non-removable storage media (Fig 7 128 primary storage device comprises non-removable hard disks, paragraph 49), said secondary storage device comprises removable storage media and a means to permit access to data stored on the removable storage media (Fig 7 130 secondary storage device comprises removable tape, paragraph 56), and said virtual device interface comprises said means for converting; and means for accessing said secondary storage device using the virtual device interface (Fig 7 130, paragraph 56 physical tape library unit TLU).

As in claim 29, Bitner discloses wherein said secondary storage device is a tape backup device (Fig 7 130), and said primary storage device is a hard drive (Fig 10 128).

As in claim 30, Bitner discloses further comprising: means for creating a virtual loader, wherein said virtual device interface comprises said means for converting, said means for accessing, and said means for creating (VTL converting tape command to disk command, an instant/ a virtual image of a compatible tape storage device is created to store information on the virtual tape, paragraph 48).

As in claim 31, Bitner discloses wherein said means for creating comprises: means for creating a directory on said hard drive (a directory is generated for data stored in DLU, paragraph 129).

As in claim 32, Bitner discloses further comprising: means for storing information on a virtual tape in said virtual loader, wherein said means for storing stores information

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in a file in said directory, and said file corresponds to said virtual tape (paragraphs 137-142, storing user data in the directory; Examiner further notes that user data stored in a storage device is belonged to file).

As in claim 33, Bitner discloses wherein said secondary storage device is communicatively coupled to said virtual device interface (Fig 7, secondary storage 130 communicatively coupled by switch 122).

### ***Response to Arguments***

Applicant's arguments in response to the last office action has been fully considered but they are not persuasive. Examiner respectfully traverses Applicant's arguments for the following reasons:

A) Regarding Applicant's arguments at pages 10-12 for the rejections of claims 1-33 under 35 U.S.C 102(e), the arguments are not persuasive. Applicant argues

The Office Action cites figure 8 and paragraph 20 of Bitner as teaching "backup application and VTL [server] as virtual device interface for primary device 150." Office Action, p. 3. Thus, the Office Action appears to be equating the combination of the backup application and the VTL server with the virtual device interface of claim 1. However, as described in more detail below, unlike the virtual device interface of claim 1, the proposed combination of Bitner's backup application and VTL server is incapable of receiving a call from a utility.

The Office Action cites figure 8 and paragraph 56 of Bitner as disclosing "backup application and VTL [server] receives a call by a routine/utility in an user program." Office Action, p. 3-4. Paragraph 56 describes the implementations

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shown in figures 7 and 8 of Bitner, stating that a **"backup application 121 in host 120 initiates.., media duplication" (emphasis added)**. In Bitner, backup applications act as initiators in issuing commands to target tape storage devices. Bitner, pp[ [0059]. Thus, in Bitner, the backup application appears to be the component that requests access to the various storage devices. Nothing in the cited portions of Bitner discloses any other routine, utility, or user program that would make a call to the combined backup application and VTL server. Thus, the combination of the backup application and VTL server cannot receive a call from a routine/utility in a user program as described in the Office Action. Instead, such a system would initiate activity internally: the backup application initiates the command issued to a target tape storage device, and the "VTL server 188 . . . accepts the host (initiator) request (command)." Bitner, pp [0088]. Thus, the cited art fails to teach or suggest that that the combination of the backup application and the VTL server could receive a call from a routine/utility in a user program. Accordingly, Bitner fails to teach or suggest the virtual device interface of claim 1, which explicitly receives a call from a utility".

In response, Applicant's argument seems to be since the backup application initiates the media duplication's steps, thus it can not be in response to a call from a utility as recited in the claim. Examiner disagrees, first an application/program such as the backup application are passive code modules/routines that can only be invoked, i.e. called by an other specific code module routine in the computer system when the backup event occurs. For example, when a user/administrator starts backing up data,

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he types in a backup command at keyboard, **a utility/code** associating with keyboard converts the user/administrator typing command into a backup event and forward this backup event/command to other code routine modules such as the backup application which in turn initiates the media duplication's steps. Therefore Applicant's argument's is not persuasive.

Applicant's arguments regarding independent claims 10,16,22 and 28 are similar to the arguments offered for claim 1 and the same responses apply. As such, these arguments are found to be not persuasive.

Applicant's arguments regarding dependent claims 2-9,11-15,17-21,23-27 and 29-33 are similar to the arguments offered for claim 1 and the same responses apply. As such, these arguments are found to be not persuasive.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 36 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Hyung S. Sough/  
Supervisory Patent Examiner, Art Unit 2188  
12/03/08